

WHAT IS CLAIMED IS:

- 1 1. A method for recoverable programming, comprising the steps of:
 - 2 identifying a predetermined instruction sequence;
 - 3 monitoring for memory access errors;
 - 4 logging a memory access error in an error logging register;
 - 5 polling the register for any logged memory access error during execution of the
 - 6 instruction sequence; and
 - 7 raising exceptions, if the memory access error is logged.
- 1 2. The method of claim 1, further comprising the steps of:
 - 2 checkpointing a predetermined set of system data; and
 - 3 recovering from the memory access error using the checkpointed system data, if
 - 4 the memory access error is logged during execution of the instruction sequence.
- 1 3. The method of claim 1, further comprising the step of:
 - 2 setting data returned in response to the memory access request equal to a set of
 - 3 predefined fake data, if the memory access error is logged during execution of the
 - 4 instruction sequence.
- 1 4. The method of claim 3, further comprising the step of:
 - 2 skipping the polling and raising steps if the data returned in response to the
 - 3 memory access request is not equivalent to the predefined fake data.
- 1 5. The method of claim 1, further comprising the step of:

2 masking a machine check abort handle.

1 6. The method of claim 5, after the raising step, further comprising the steps of:
2 enabling the machine check abort handle.

1 7. The method of claim 1, further comprising the step of:
2 updating pointers, if the memory access error is logged.

1 8. The method of claim 1, further comprising the step of:
2 re-executing the memory access request, if software so commands.

1 9. A method for recoverable programming, comprising the steps of:
2 identifying a predetermined instruction sequence;
3 checkpointing a predetermined set of system data;
4 masking a machine check abort handle;
5 monitoring for memory access errors;
6 logging a memory access error in an error logging register;
7 polling the register for any logged memory access error during execution of the
8 instruction sequence;
9 raising exceptions, if the memory access error is logged;
10 updating pointers, if the memory access error is logged;
11 recovering from the memory access error using the checkpointed system data, if
12 the memory access error is logged during execution of the instruction sequence.;
13 re-executing the memory access request, if software so commands; and

14 enabling the machine check abort handle.

1 10. A computer-usable medium embodying computer program code for commanding
2 a computer to perform recoverable programming, comprising the steps of:
3 identifying a predetermined instruction sequence;
4 monitoring for memory access errors;
5 logging a memory access error in an error logging register;
6 polling the register for any logged memory access error during execution of the
7 instruction sequence; and
8 raising exceptions, if the memory access error is logged.

1 11. The medium of claim 10, further comprising the steps of:
2 checkpointing a predetermined set of system data; and
3 recovering from the memory access error using the checkpointed system data, if
4 the memory access error is logged during execution of the instruction sequence..

1 12. The medium of claim 10, further comprising the step of:
2 setting data returned in response to the memory access request equal to a set of
3 predefined fake data, if the memory access error is logged during execution of the
4 instruction sequence.

1 13. The medium of claim 13, further comprising the step of:
2 skipping the polling and raising steps if the data returned in response to the
3 memory access request is not equivalent to the predefined fake data.

1 14. The medium of claim 10, further comprising the step of:

2 masking a machine check abort handle.

1 15. A system for recoverable programming, comprising:

2 means for identifying a predetermined instruction sequence;

3 means for monitoring for memory access errors;

4 means for logging a memory access error in an error logging register;

5 means for polling the register for any logged memory access error during

6 execution of the instruction sequence; and

7 means for raising exceptions, if the memory access error is logged.

1 16. The system of claim 15, further comprising:

2 means for checkpointing a predetermined set of system data; and

3 means for recovering from the memory access error using the checkpointed

4 system data, if the memory access error is logged during execution of the instruction

5 sequence..

1 17. The system of claim 15, further comprising:

2 means for setting data returned in response to the memory access request equal to

3 a set of predefined fake data, if the memory access error is logged during execution of the

4 instruction sequence.

1 18. The system of claim 17, further comprising:

2 means for bypassing the means for polling and means for raising if the data
3 returned in response to the memory access request is not equivalent to the predefined fake
4 data.

1 19. The system of claim 15, further comprising the step of:
2 means for masking a machine check abort handle.

Pub. No. 6,942,800